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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/827,047

04/19/2004

Richard F. Bergen

D/03

2388

7590

10/05/2004

William A. Henry, II
14 Barrington Hills
Pittsford, NY 14534

EXAMINER

HARRINGTON, ALICIA M

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,047

Applicant(s)

BERGEN, RICHARD F.

Examiner

Alicia M Harrington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-17 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 7 and 8 is/are rejected.
- 7) ☒ Claim(s) 3, 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0404.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The Examiner has considered the information disclosure statement filed on 4/19/04.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,2,4,7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phuly et al (US 6,470,578).

Regarding claim 1, Phuly discloses a line creating apparatus, comprising:

a laser source (55; see figure 3; col.), lines 1-27) adapted to produce radiant energy;

a laser output altering device (2/59/56; see figure 3), and wherein radiant energy projected from said laser (55) source orthogonally into said laser output altering (2/59/56) device emerges from said laser output altering device in a predetermined plane (target plane/via mirror surface of cone #9; see figures 11 and 12); and

a cone having reflecting surfaces (mirrored surface; see col. 4, lines 50-60) and adapted such that radiant energy from said laser source (55) is projected through said laser output altering device (2/59/56) and onto said surfaces of said cone surface to project a line at said predetermined angle (line/circle with angular range- see also col. 7, lines 29-40) within said predetermined plane (target plane; see also col. 5, line 1- col. 6, lines 67). However, Phuly fails to specifically disclose a mirror with surfaces positioned at a predetermined angle with respect to one another surface.

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Although, the cone is the functional equivalent of a mirror since it provides mirrors as the coating to reflect light. The cone is a 45-degree cone as angled (in figures 2 and 3) from the optical axis on each side. Thus, the cone is a continuous surface but each side of the cone has an angular relation to the optical axis to create a line in plane (a circular line). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that cone reflective mirrored surfaces provides the equivalent function to a mirror with surfaces positioned at a predetermined angle to one another, since each provide a the reflectance properties necessary to produce a line in plane.

Regarding claim 2, Phuly discloses the apparatus of claim 1, wherein said line is a level line and in the form of a circle (see figure 11).

Regarding claim 4, Phuly discloses the apparatus of claim 1, wherein said device is in the form of a hollow tube (see figure 3; 59).

Regarding claim 7, Phuly discloses the apparatus of claim 1, wherein said cone reflector has a predetermined angle is 45 with the optical axis. Thus, it would have been further obvious to one of ordinary skill in the art at the time the invention was made to have mirror surfaces angled at 45 degrees, since Phuly teaches this angular reflective orientation creates a line in a plane.

Regarding claim 8, Phuly discloses the apparatus of claim 1, wherein said cone reflector has a predetermined angle with the optical axis of 45 degrees in one embodiment and may have an angle of 90 degrees in another embodiment (see col. 7, lines 29-40). Thus, it would have been further obvious to one of ordinary skill in the art at the time the invention was made to have mirror surfaces angled at 90 degrees, since Phuly teaches this angular reflective orientation

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creates a line in a plane and Phuly teaches different reflective angular relationships are needed to allow the device to project a beam/line according to the distance to the target plane.

Allowable Subject Matter

4. Claims 9-17 is allowed.

5. Claims 3,5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 3, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which at least include wherein said device is in the form of a capillary array as claimed.

Regarding claim 5, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which at least include wherein said device is in the form of a hollow tube within a hollow tube as claimed.

Regarding claim 6, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features

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as presented in independent claims, which include a light altering device in the form of a fiber optic rod as claimed.

Regarding claim 9, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which at least include a pair of orthogonally connected substrates, said substrates including mirrors attached to a surface thereof, said light altering device being positioned in contact with said mirrors, and wherein one of said pair of substrates includes a channel therein through which said laser source projects radiant energy into said laser output altering device as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M Harrington whose telephone number is 571 272 2330. The examiner can normally be reached on Monday - Thursday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571 272 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AMH

Alicia M Harrington
Examiner
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